INDUSTRIAL BASE PRESENTATION
ON THE
SPACE TECHNOLOGY TRACK PANEL

NASA CONFERENCE

"TURNING GOALS INTO REALITY"

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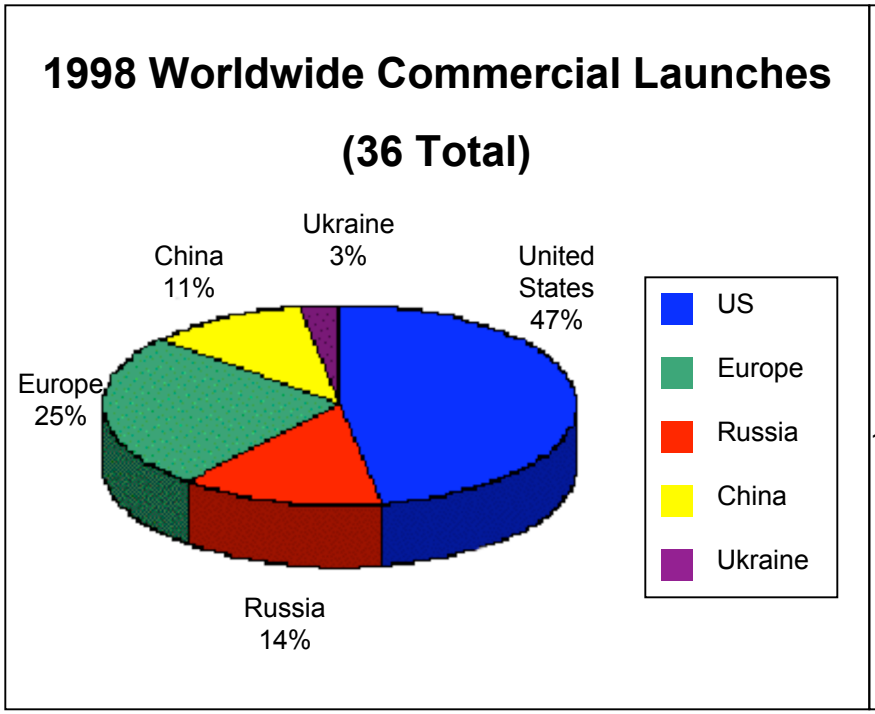
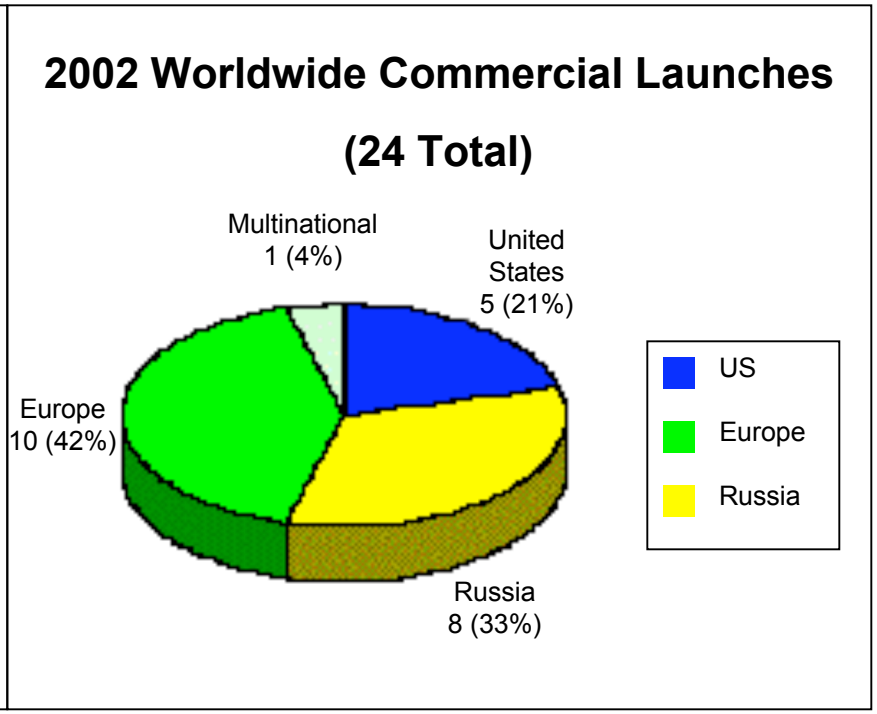
U.S. Space Transportation - Background

- U. S. Launch Industry is at a crossroads
  - Huge private investments anticipated a commercial market that has not occurred
  - No credible business case to obtain stockholder approval for future investments
  - Yet…national security and civil space needs depend on a strong domestic launch infrastructure

Worldwide Commercial Launches 1998 vs. 2002





SOURCE: FAA/AST Year in Review Reports 1998 & 2002

U.S. Space Transportation - Background

- U.S. launch industry face increasing competition from foreign providers
  - ESA's member governments pledging ~$2B into Europe's launch sector for:
    - Ariane 5 recovery and enhancement
    - A five-year launch subsidies program to bolster the commercial market
    - A commercial Soyuz launch pad in F. Guiana
    - A future launch vehicle; guaranteed access to space

U.S. Space Transportation - Background

- U.S. industry needs a similar long-term government commitment to ensure national security responsiveness, continued research & exploration, and future commercial competitiveness.
- We're optimistic that help is on the way:
  - New, "friendlier" space policy
  - Substantial USG financial investment

U.S. Space Transportation - Policy

- First space policy review since 1994/96
  - NSPD-15, June 28, 2002
  - Significant industry input
  - On hold pending Gehman Report
- Major industry inputs:
  - Focus on strong national goals
  - Eliminate stovepipes
  - Include policy implementing actions

U.S. Space Transportation - Policy

- Provide more flexibility in NASA & DoD roles
- Invest in space-related S&T; stimulate the U.S. space workforce/industrial base
- Streamline commercial launch regulations
- Involve industry in the review of policy, rulemaking, agreements, etc.

U.S. Space Transportation - Investment

- The primary government funding sources:
  - DoD's National Aerospace Initiative (NAI)
    - Provides technology development & demonstration with off-ramps to future systems
    - Emphasizes high speed/hypersonics, and space access
    - Strong tie to NASA's NGLT efforts
    - But…is it really new? Will Congress buy it?

U.S. Space Transportation - Investment

- NASA's: Integrated Space Transportation Plan (ISTP) & Nuclear Systems Initiative (NSI)
  - Bridges near-term heavy lift and human exploration/research (Shuttle upgrades) to emergency crew return and in-space transportation capabilities (OSP) to future requirements (NGLT)
  - However, cost/execution details are not clear, nor has NASA convincingly "connected the dots"

U.S. Space Transportation - Investment

- Major program cancellations between Challenger and Columbia:

– ASRM	X-33
– STME	X-34
– NASP	X-38
– DC-X	COBRA

- The track record makes corporate investment a tough sell.

U.S. Space Transportation - Summary

- Only substantial, sustained government funding will keep U.S. space launch industry viable until a commercial market develops
- NASA's ISTP/NSI and DoD's NAI are the only feasible growth engines
- Neither are perfect…yet…but both are essential.